

## CLAIMS

- 1 1. A storage system comprising a plurality of units of storage, each unit of storage storing  
2 digital data, each unit of storage accessed by specifying an address and a time.
- 1 2. The storage system of claim 1, further comprising one or more physical storage devices  
2 on which the digital data are stored.
- 1 3. The storage system of claim 2, wherein the address comprises a device identifier and a  
2 location identifier.
- 1 4. The storage system of claim 3, wherein the device identifier identifies a physical storage  
2 device.
- 1 5. The storage system of claim 3, wherein the device identifier identifies a logical device.
- 1 6. The storage system of claim 1, wherein the time specifies that the digital data retrieved  
2 from the address is the most recent digital data that was written to the address at or before the  
3 time.
- 1 7. The storage system of claim 1, wherein the time is explicitly specified in a request to  
2 access a unit of storage.
- 1 8. The storage system of claim 1, wherein the time is specified in a command to the storage  
2 system separate from a request to read a unit of storage.
- 1 9. The storage system of claim 1, wherein the storage system creates a virtual device,  
2 wherein the time is specified when the virtual device is created, and is applied when the virtual  
3 device is accessed.
- 1 10. The storage system of claim 9, wherein new data is written to the virtual device without  
2 removing the data that was written after the time specified when the virtual device was created.
- 1 11. The storage system of claim 1, wherein a command to the storage system specifies that  
2 the time is implicitly the current time.

- 1    12.    The storage system of claim 1, wherein the time is specified relative to the current time.
- 1    13.    The storage system of claim 1, wherein the units of storage are blocks.
- 1    14.    A method of accessing data stored on a storage device, the method comprising:  
2            specifying an address and a time to access the most recent data stored on the storage  
3    device at the address at or before the time.
- 1    15.    The method of claim 14, wherein the address comprises a device identifier and a location  
2    identifier.
- 1    16.    The method of claim 14, wherein specifying the time comprises implicitly specifying the  
2    time.
- 1    17.    The method of claim 16, wherein implicitly specifying the time comprises sending a  
2    command to the storage system to use the current time as the time.
- 1    18.    The method of claim 14, further comprising presenting a virtual storage device for which  
2    the time is implicitly set to the specified time for all addresses of the virtual storage device.
- 1    19.    The method of claim 18, further comprising writing data to the virtual storage device.
- 1    20.    The method of claim 14, wherein specifying the time comprises specifying the time  
2    relative to the current time.
- 1    21.    Apparatus for storing data, the apparatus comprising:  
2            a storage appliance that interfaces with a computer;  
3            one or more physical storage devices that interface with the storage appliance, each such  
4    storage device controlled by the storage appliance;  
5            wherein the storage appliance presents one or more virtual storage devices to the  
6    computer, and wherein data on each of the virtual storage devices is accessed by specifying an  
7    address and a time.

1 22. The apparatus of claim 21, wherein the time specifies that the digital data retrieved from  
2 the address is the most recent digital data that was written to the address at or before the time.

1 23. A data packet corresponding to a storage device command, the data packet comprising:  
2 a storage device address identifying the location of one or more units of storage;  
3 and  
4 a time specification specifying data most recently stored at the storage device  
5 address at or before a specified time.

1 24. The data packet of claim 23, wherein the storage device command is a write command  
2 and the point in time is the present time.

1 25. The data packet of claim 23 wherein the storage device command is a read command and  
2 the point in time is the past time.